

Policy Changes Continue To Affect China's Oilseeds Trade Mix

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Highlights: China's imports of soybeans reached an estimated 13.2 million tons in 2000/01, its highest-ever level. Soybean oil and soymeal imports fell sharply due to a value-added tax on soymeal imports intended to protect domestic crushing margins. Government support for soybeans is less than support for coarse grains, especially in the northeastern region of China where competing cropping patterns are important. Rising urban incomes are stimulating demand for better grade edible oils. China's accession to the World Trade Organization could favor imports of oils over imports of soybeans and soymeal.

China's erratic shifts in domestic agricultural policy can create an unstable market environment. Policy measures intended to affect one commodity can often spill over into related markets. The lifting of China's value-added tax (VAT) on soymeal imports and the subsequent restoration of the tax during the 1990s exemplifies the country's tendency to shift policies.

In making policy decisions, China distinguishes between soybeans and soybean products. Soybeans and soybean oil are food items used for making tofu (doufu) and cooking oil, while soymeal is an ingredient used for making processed compound feeds. In 1995, the government lifted the VAT on soymeal to encourage growth in the livestock industry and raise per capita meat consumption. This policy led to an influx of 3.6 million tons of soymeal imports in 1996/97 and another 4.2 million tons in 1997/98. Abundant supplies of soymeal hurt soybean prices, reduced domestic crushing margins, and discouraged producers from planting soybeans. As domestic crush fell and demand for oils rose, smuggling of edible oils ensued, peaking in summer 1998. Unofficial imports of vegetable oils were estimated at 1.65 million tons in 1998.¹ Lifting the VAT from soymeal imports created

imbalances in the soybean complex and distorted domestic corn/soybean cropping patterns.

To correct these imbalances, China re-imposed the 13-percent VAT on all imported soymeal in July 1999. Restoration of the VAT on soymeal imports favored imports of unprocessed soybeans as opposed to soybean products.² Consequently, soymeal imports dropped from 4.2 million tons in 1997/98 to 0.1 million tons in 2000/01. Soybean oil imports also declined from 1.65 million tons in 1997/98 to 0.08 million tons in 2000/01. Soybean imports soared from 3.8 million tons in 1998/99 to 10.1 million tons in 1999/00 (plus another 3.7 million tons of rapeseed that year) and are projected to rise to 14 million tons in 2001/02 (table G-1). The rising use of raw oilseeds improved domestic crushing capacity, increased employment, and diminished smuggling of edible oils. China's reversal of the soymeal VAT policy exemplifies how the country's competing policy objectives (e.g., favoring certain industries, engineering food consumption patterns, and solving unemployment problems) can lead to instability that reverberates in markets throughout the world.

¹ The difference between imports as reported by China's Custom's data and total soybean oil exports to China reported by the United States, Brazil, Argentina, and European Union.

² The VAT plays an important role in keeping China's domestic soybeans competitive with foreign imports. While the VAT is collected on imports at the border, domestic producers either fail to pay the VAT or absorb the tax without passing it on to their customers and then receive rebates to defray losses.

Table G-1—China's soybean, soymeal, and soybean oil indicators, 1997/98-2001/02

Product	1997/98	1998/99	1999/00	2000/01	2001/02
<i>Million tons</i>					
Soybeans:					
Production	14.7	15.2	14.3	15.4	15.0
Crushing	8.5	12.6	15.1	18.7	21.6
Imports	2.9	3.9	10.1	13.2	14.0
Exports	0.2	0.2	0.2	0.2	0.2
Soybean meal:					
Production	6.7	10.0	12.0	14.8	17.2
Imports	4.2	1.4	0.6	0.1	0.3
Exports	0.0	0.0	0.0	0.1	0.1
Soybean oil:					
Production	1.4	2.1	2.5	3.1	3.6
Imports	1.7	1.0	0.6	0.1	0.2
Exports	0.1	0.1	0.1	0.1	0.1

Source: U.S. Department of Agriculture, *World Agricultural Supply and Demand Estimates*, October 12, 2001.

In May 2000, the VAT issue resurfaced. China's State Administration of Taxation announced that the VAT should be removed from the price list for domestic protein meal, which was defined and used as a feed ingredient, effective June 1, 2000. The announcement confused many agribusiness firms as well as a number of government agencies in China, including the Ministry of Agriculture, the Ministry of Finance, and the State Administration of Grain Reserve. The on-again, off-again nature of the soybean VAT temporarily threw the soy complex trade into chaos. Eventually, the State Council blocked the decision to protect the domestic crushing industry, preserve government revenue, and maintain consistency with the previous policy of limiting soybean imports.

China's decision-makers continue to struggle to find policies that achieve their intended goals without disrupting other sectors. In making soy-related policy, decision-makers must strike a balance among crop production, animal feeding, oil crushing, and refining subsectors. Thus far, policy-makers have had limited success. Urban and rural interests must also be balanced. Recent policies intended to benefit urban residents with cheap meat and oil products worked against the interests of farmers and caused great disruptions in agricultural markets.

Favorable Treatment of Corn Erodes Soybean Production

Domestic farm price policies that favor corn over soybeans have also affected China's soy complex in recent years. China's food security policy has empha-

sized production of corn and food grains, but not soybeans. As in the United States, corn is the chief competing crop for soybean planted area. Both crops are grown primarily in China's northern provinces. While corn production is still carefully managed, China has been reducing the role of government procurement of soybeans for years. After many rounds of policy reforms, Heilongjiang, the most important soybean-producing province in China, was the only province that still maintained a procurement system that required a government procurement price. However, the latest report from China indicated that, effective in 2001, farmers in Heilongjiang will not receive a government-guaranteed procurement price for its soy crops. Corn growers in the province still receive a government procurement price.

The ratio of soybean-to-corn returns (measured by the ratio of government-set procurement prices/loan rates) is less favorable in China than in the United States (table G-2). Since 1994, China's soybean-corn price ratio has fallen from over 2.2 to 1.8. In the United States, the soybean-corn price ratio rose from 2.6 to 2.8 over the same period. Assuming that there were no offsetting trends in yields or production costs, this comparison suggests that the attractiveness of soybeans relative to corn has fallen for producers in China, while it has risen for producers in the United States. In recent years, China's soy imports have risen while China's corn supplies have expanded (see "Subsidized Corn Exports Help Prices Rebound" in this report). Imported soybeans accounted for 53 percent of total crushing in 2000/01. This degree of reliance on imports alarmed

Table G-2—A comparison of price support programs between China and the United States

	China's procurement prices			U.S. loan rates		
	Soybeans	Corn	Ratio	Soybeans	Corn	Ratio
	<i>Yuan/kilogram</i>			<i>Dollar/bushel</i>		
1990	0.83	0.38	2.18	4.50	1.57	2.87
1991	0.88	0.38	2.32	5.02	1.62	3.10
1992	0.91	0.42	2.17	5.02	1.72	2.92
1993	1.04	0.46	2.26	5.02	1.72	2.92
1994	1.54	0.69	2.23	4.92	1.89	2.60
1995	1.81	0.86	2.10	4.92	1.89	2.60
1996	1.95	1.06	1.84	4.97	1.89	2.63
1997	2.28	1.23	1.85	5.26	1.89	2.78
1998	2.23	1.23	1.81	5.26	1.89	2.78
1999	2.10	1.14	1.84	5.26	1.89	2.78
2000	na	na	na	5.26	1.89	2.78
2001	na	na	na	5.26	1.89	2.78

Note: na = not applicable.

Sources: China's Ministry of Agriculture and U.S. Department of Agriculture.

government decision-makers and could trigger another round of policy changes.

Crushing Margin Is Getting Lower

As soybean processing margins grew in the mid-1990s, China began promoting domestic processing. Total crushing capacity (soy only), which expanded by one-fourth in the past 2-3 years, now exceeds 23 million tons per year and is still growing. Most new crushing plants are located in southern China, where commercialized hog and poultry operations are common. New crushing facilities with impressive daily processing capacities of 3,000 tons have also been established in coastal areas. The annual crushing utilization rate was estimated at 70 percent in 2000. Most new plants are joint ventures that operate at full capacity so as to repay construction loans and debts as early as possible. New plants are more efficient, tend to be located near high-demand, wealthy southern cities, and are more likely to use imported soybeans. The rising capacity from new plants has reduced crushing margins, put pressure on operating capital, and pushed old and inefficient plants out of production (fig. G-1).

In recent months, weakening demand for end products has also reduced crushing margins, especially in northern and northeastern China. Soymeal prices are stagnant because the expansion of China's hog and poultry industry has slowed. Meanwhile, substitution between soybean oil and competing edible vegetable

oils, and between crude and refined oils, has prevented soybean oil prices from rising excessively.

Production in the southeastern province Guangdong, whose facilities have a 7,000-ton daily crushing capacity, is still rising to supply high-protein feed to that province's growing poultry industry. Because of Guangdong's coastal location, its crushers most likely use imported oilseeds, both soybeans and rapeseed. The local crushing margin is relatively high because the local soymeal price is higher than prices in other areas of China. The poor transportation infrastructure within China renders domestic shipments of soybeans and soymeal more costly to Guangdong crushers than imports.

Urban Consumption of Quality Salad Oil Increasing

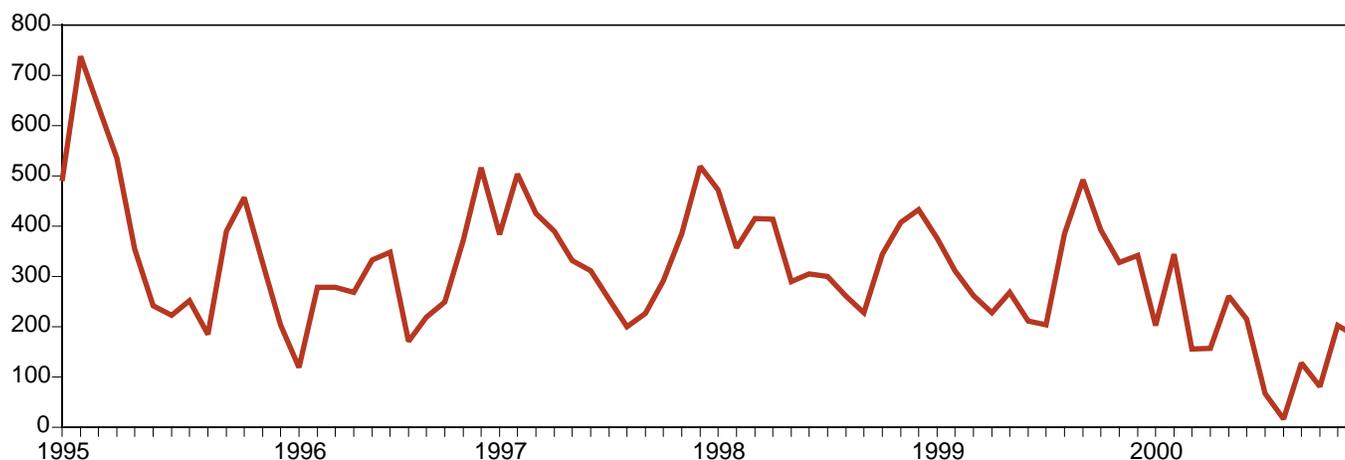
Chinese consumers have traditionally used animal fats and vegetable oils that were available in their local areas. For example, consumers in northeastern China used soybean oil, consumers in the Yangtze River area used rapeseed oil, and consumers in southern China, such as Guangdong province, used peanut oil. Now, China is the world's second-largest importer of palm oil, used mainly in processing instant noodles.

Per capita consumption of edible oils measured by purchased amount from China's household survey, has increased for both urban and rural residents (fig. G-2). While urban residents are eating more meat products

Figure G-1

China's crushing margin for soybeans, monthly, 1995-2000

Yuan/ton



Source: China's National Grains and Oils Information Center.

and less animal fats, rural residents are consuming more edible oils. Although the income gap between urban and rural residents is widening, the gap in per capita consumption of vegetable oils between rural and urban populations is steady at about 3 kilograms, or about 35 percent of the consumption levels between the two groups, since the mid-1980s. With a growing population and an increased need for edible oils, China seeks to increase production of all kinds of oils and minor oilseeds, including rapeseed (canola-type), peanut, sunflower, sesame, and cottonseed.

Regional diversity in consumption for urban residents is gradually disappearing, due to improved quality of cooking oils. Refined salad oils are replacing (or have replaced) the most popular crude #2 oils in urban areas. Although soybean oil will account for the largest share of oil consumption, substitution among minor oils will increase. Price differences between soybean oils with respect to rapeseed, sunflower seed, and peanut oils will narrow.

Low Tariffs for Soybeans and Soymeal, Tariff-Rate Quota Set for Soybean Oil

China's grain policy now focuses on maintaining self-sufficiency in corn and food grains, while soybean policies are more liberalized. This liberalization is reflected in the relatively low tariff rate of 3 percent currently in place for soybeans. Soymeal imports are subject to a 5-percent tariff and a 13-percent VAT. The 1999 bilateral trade agreement between the United States and China contains special terms for soybean oil

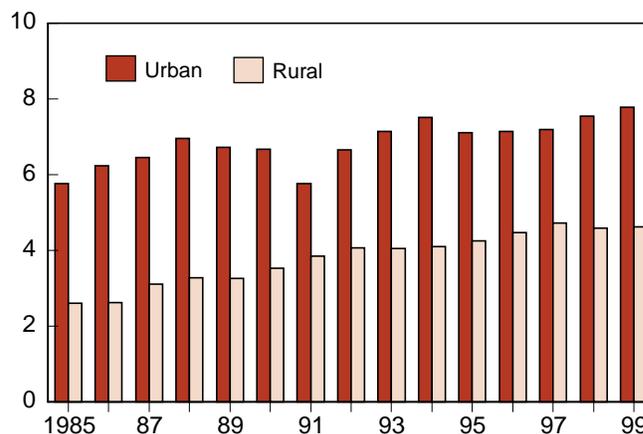
but excludes specific terms for soybeans and soymeal (see "U.S.-China Bilateral WTO Agreement and Beyond" in this report). Quotas on soybeans and soymeal were not in place prior to the bilateral agreement, and none were established in the agreement.

The bilateral agreement established a tariff-rate quota (TRQ) of 2.3 million tons for soybean oil in 2002, which rises to 3.26 million tons in 2005. Within-quota imports would be subject to a low duty of 9 percent, while above-quota imports would be assessed a prohibitively high duty of 48 percent in 2002, falling to 9 percent in 2006. Private trading companies would

Figure G-2

Per capita consumption of vegetable oils, urban versus rural, in China, 1985-99

Kilograms



Source: National Bureau of Statistics, China.

be allocated 66 percent of the TRQ in 2002, rising to 90 percent in 2005. The TRQ system for soybean oil would be eliminated by 2006 and converted to a bound 9-percent tariff rate.

The bilateral agreement between the United States and China contained no provisions for rapeseed or other minor oilseeds. However, Canada has negotiated similar terms for canola oils, including a TRQ that will start at 600,000 tons upon China's accession to the World Trade Organization (WTO) and rise to 1.13 million tons over 5 years.³ Canola oil would face the same tariff level at 9 percent to be competitive with alternative edible oils. No TRQ would apply to canola seed. Also, China has a bilateral agreement with Malaysia to eliminate China's palm oil quota within 6 years after WTO accession. The palm oil quota was set at 1.5 million tons in the first year. The agreement also allows nonstate trading enterprises to handle 50 percent of palm oil imports in the first year and 90 percent by the fifth year.

China's Imports of Edible Oils Should Rise Under WTO

USDA's Economic Research Service analysis indicates that China's total imports of soybean, soybean oil, and soymeal will rise at an average of 19 percent (soybeans), 78 percent (soybean oil), and 30 percent (soymeal) over the baseline levels between 2001 and 2010, assuming China's accession to the WTO occurs in 2001 (table G-3) (see box). China is expected to import growing amounts of within-quota soybean oil, but less than the full amount of 3.26 million tons by 2005 as agreed upon in the bilateral agreement. Potential imports of soybean oil are expected to be partly offset by increasing imports of soybeans as the over-quota duty declines. Imports of soybeans will grow even more following elimination of the soybean oil TRQ system after 2005.

The simulation results also show some increases of 2.6 percent (soybeans), 3.9 percent (soybean oil), and 1 percent (soymeal) in world *real* prices over the projection period. World suppliers will benefit not only from higher volume shipped to China but also from slightly higher prices for soybeans and soybean products.

³ News release from the Department of Foreign Affairs and International Trade, Canada, Website, <http://www.agr.ca/itpd-dpci/cr4.html>, November 26, 1999.

ERS simulation of China's accession to WTO

ERS analyzed the likely changes in global oilseed trade arising from China's accession to the WTO. The analysis used the global Country Linked System (CLS) of models, a quantitative analytical tool used to generate the USDA annual baseline. The system contains 42 foreign country and regional models and interacts with the Food and Agricultural Policy Simulation model of U.S. agriculture. The CLS contains about 18,000 equations per year of projections on production, consumption, imports, and exports in the model with endogenized calculation of world prices.

The 2001 baseline projections were released at USDA's Agricultural Outlook Forum in February 2001. The longrun baseline projections through 2010 were built on specific assumptions regarding macroeconomic conditions, policy, weather, and existing patterns of trade with no external shocks (including WTO accession by China). ERS projected trade levels under China's WTO accession and compared the projections with baseline projections to estimate the likely impacts of China's accession to the WTO.

In addition to the oilseed complex, the analysis included corn, wheat, cotton, rice, and other agricultural commodities. ERS assumed that China would continue to assess the VAT on oils and meal imports and clamp down on smuggling of edible oils to support domestic crushing facilities in the short term. This policy is expected to have only a marginal effect on China's oilseed and products trade, as inefficiencies in China's domestic crushing sector are likely to limit its long-term competitiveness. Over the baseline projection period, ERS assumed that China's economy will continue to grow rapidly at 6.5-7.5 percent annually, with a projected population growth of 0.7-0.8 percent per year.

The increase of China's soybean and soybean product imports could be a direct effect of lower area sown to soybeans for the simulation period. China would grow less soybeans, rapeseed, wheat, corn, and cotton, but more rice, when government protection prices face challenges from overseas producers. Estimated soybean sown area would decline by an average of 3.9 percent between 2001 and 2010 while domestic

Table G-3—China’s accession to WTO would boost its imports of soybeans and bean products from projected USDA 2001 baseline levels

Crop years	Soybean		Soybean oil		Soymeal	
	Baseline ¹	WTO changes	Baseline ¹	WTO changes	Baseline ¹	WTO changes
	Million tons	Percent	Million tons	Percent	Million tons	Percent
1997/98	2.9		1.7		4.2	
1998/99	3.9		1.0		1.4	
1999/00	10.1		0.6		0.6	
2000/01	13.2		0.1		0.1	
2001/02	14.0		0.3		0.2	
2002/03		12.56		77.33		28.16
2003/04		14.40		77.46		29.54
2004/05		15.74		77.35		29.90
2005/06		17.54		77.36		29.17
2006/07		19.75		77.56		29.26
2007/08		22.70		78.53		29.52
2008/09		24.30		78.79		30.80
2009/10		25.91		79.11		31.71
2010/11		27.59		79.15		33.24

Notes: Baseline estimates were combined from two sources: Annual estimates (from 1997/98 to 2001/02) published in *WASDE*, October 2001, and long-term projection numbers from *USDA Agricultural Baseline Projections to 2010*, February 2001.

Source: Economic Research Service, USDA.

crushing would decrease by an average of 4.5 percent. For the same simulation period, rapeseed areas would decrease by an average of 5.5 percent. However, the simulation also showed that combined total output of pork, poultry meat, beef, and veal will grow at an average annual rate of 3.3 percent and push up demand for more protein meals, which could imply more imports of soymeal. The results indicate that China’s consumers will enjoy lower food grain (wheat and rice) prices after the country’s WTO accession. However, China’s livestock producers will have to adjust to higher price levels of protein meals.

Palm and rapeseed oil are potential competing products with soybean oil. But, continued strong demand for crude and refined soybean oil for home consumption and for special use in processed food items could limit the potential substitution for soybean oil imports.

China will be a promising market for edible oils due to the increased import quotas and reduced tariffs that follow its accession to the WTO. However, since oil accounts for only about 18 percent of processed soybean products, the impact of liberalizing the soybean oil market on soybean prices and demand could be small. For example, in 1994, soybean oil prices increased sharply due to decreased rapeseed output, but this increase had no impact on soybean

prices. In 1999, demand for soybeans suddenly increased and soybean prices rose, yet at the same time prices for soybean oil decreased.

The ERS analysis does not allocate trade gains among major suppliers. Table G-4 shows market shares for individual countries for major oilseeds and products. While the United States, Brazil, and Argentina have been strong as suppliers to China for soybeans, soybean oil, and soymeal, India has emerged as a strong competitor in soymeal. The combined total of rapeseed (and canola) from Canada and Australia accounted for an average of 70 percent of China’s rapeseed imports. The European Union’s share of rapeseed oil has decreased from a peak of 79 percent in 1997 to 2.5 percent in 2000. Malaysia and Indonesia are the dominant palm oil suppliers to China.

Reference

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U.S. Department of Agriculture, Office of Chief Economist. *USDA Agricultural Baseline Projections to 2010*, February 2001, p. 140.

Table G-4—China's imports of major oilseeds and products, 1996-2000

Markets	1996	1997	1998	1999	2000	Average	Share
	-----1,000 tons-----						Percent
Soybeans:							
United States	859.7	2,285.6	1,752.4	2,444.7	5,413.8	2,551.2	58.4
Brazil	52.8	439.9	941.2	860.1	2,119.6	882.7	20.2
Argentina	118.0	0.0	391.1	964.0	2,784.3	851.5	19.5
Canada	10.2	11.2	12.8	38.4	54.5	25.4	0.6
Others	66.9	54.9	98.8	8.1	44.0	54.6	1.2
Total	1,107.5	2,791.5	3,196.3	4,315.4	10,416.2	4,365.4	100.0
Soybean oil:							
United States	51.3	288.8	395.3	290.8	62.3	217.7	24.6
Brazil	955.7	638.6	157.7	132.5	72.9	391.5	44.2
Argentina	162.2	202.3	202.3	361.4	137.5	213.1	24.1
Canada	0.0	0.0	1.8	1.0	0.0	0.6	0.1
Others	125.5	63.6	71.7	18.1	34.9	62.8	7.1
Total	1,294.7	1,193.3	828.8	803.7	307.6	885.6	100.0
Soymeal:							
United States	105.1	386.1	858.6	84.6	0.3	286.9	14.1
Brazil	399.1	1,432.3	1,144.2	77.5	87.0	628.0	30.9
Argentina	759.5	1,049.2	832.3	224.6	316.3	636.4	31.3
India	578.8	548.7	890.9	159.8	96.8	455.0	22.4
Others	33.9	53.2	7.3	25.5	4.9	25.0	1.2
Total	1,876.5	3,469.5	3,733.3	571.8	505.3	2,031.3	100.0
Palm oil:							
Malaysia	773.7	813.9	708.9	781.3	908.9	797.3	70.3
Indonesia	164.6	290.5	187.0	355.2	464.1	292.3	25.8
Singapore	5.3	14.0	2.6	22.5	8.6	10.6	0.9
Vietnam	52.6	20.4	26.0	29.3	8.4	27.3	2.4
Others	15.9	6.9	5.6	5.3	0.8	6.9	0.6
Total	1,012.2	1,145.7	929.9	1,193.5	1,390.7	1,134.4	100.0
Rapeseeds:							
Canada		0.0	929.0	916.7	1,255.9	775.4	44.3
Australia		42.7	90.5	502.5	1,148.0	445.9	25.5
France		12.0	232.8	395.6	270.7	227.8	13.0
Germany		0.0	133.1	324.1	197.1	163.6	9.3
United Kingdom		0.0	0.0	110.1	0.0	27.5	1.6
Poland		0.0	0.0	210.3	0.0	52.6	3.0
Others		0.6	1.0	136.0	97.2	58.7	3.4
Total		55.2	1,386.4	2,595.3	2,968.9	1,751.5	100.0
Rapeseed oil:							
Netherlands	54.5	79.9	99.7	21.0	1.8	51.4	23.5
Canada	55.1	23.9	42.8	12.7	70.5	41.0	18.7
Germany	121.3	195.9	85.1	11.8	0.1	82.8	37.8
United States	0.0	15.9	13.0	11.9	0.7	8.3	3.8
Vietnam	2.0	4.5	0.0	3.3	0.0	2.0	0.9
Malaysia	53.1	18.0	16.9	3.5	1.4	18.6	8.5
Singapore	2.6	4.2	5.8	3.1	0.0	3.1	1.4
Others	27.3	8.3	21.4	1.8	0.2	11.8	5.4
Total	316.0	350.5	284.6	69.2	74.7	219.0	100.0

Sources: China's Customs Service and National Grains and Oils Information Center.